

We claims:

1. A process for the manufacture of an environmental friendly paper, comprising

forming granulates from a combination of about 56% to about 80% by weight of inorganic mineral powders, about 43% to 18% by weight of polyethylene, and about 1% to 2% by weight of additives by the steps of mixing, extruding, milling, and polymerizing;

applying said granulates into a paper film producing means which comprises at least one extruder and a forming mould having an ○-shaped gate, said forming mould having at least one inlet thereon, each said inlet defining an inner passage in said forming mould and communicating with said gate of said forming mould;

melting said granulates in said extruder, transferring said melted granulates to said inlet of said forming mould, and moulding said melted granulates into a hollow film tube substantially corresponding to said ○-shaped gate;

cooling said film tube; and

inflating said film tube and pulling an end of said film tube so that said film tube is stretched in two dimension simultaneously to form said environmental friendly paper.

2. A process according to claim 1, further comprising a step of directing said paper into a folding means to form a folded paper.

3. A process according to claim 2, further comprising a step of directing said folded paper to a cutting means so that said folded paper is cut into two sheets of paper.

4. A process according to claim 1, wherein said extruder is at a temperature in the range from about 150°C to about 220°C.

5. A process according to claim 1, wherein said film tube is moulded upward by said forming mould.

6. A process according to claim 1, wherein said film tube is cooled to about 80°C to about 120°C at a distance from about 30 mm to about 700
5 mm from said gate of said forming mould.

7. A process according to claim 1, wherein said paper film producing means comprises one extruder and a forming mould having an inlet and an inner passage.

8. A process according to claim 1, wherein said paper film producing
10 means comprises two extruders and a forming mould having two inlets and two inner passages.

9. A process according to claim 1, wherein said paper film producing means comprises three extruders and a forming mould having three inlets and three inner passages.

10. A process according to claim 3, wherein said paper has a thickness
15 from about 30mm to about 150mm.

11. A process according to claim 3, wherein said paper can be laminated to form a laminated paper having a thickness from about 150mm to about 450mm.

12. A process according to claim 3, wherein said paper is further subjected
20 to coating.

13. A process according to claim 1, wherein said inorganic mineral powders are selected from the group consisting of calcium carbonate, calcium sulfate, barium sulfate, kaolin, mica, zinc oxide, dolomite, glass
25 fiber, hollow glass microbead, silica, chalk, talc, pigment, titanium dioxide, silica dioxide, bentonite, clay, diatomaceous earth and mixtures thereof.

14. A process according to claim 1, wherein said polyethylene comprises high density polyethylene, or a combination of high density polyethylene with at least one selected from the group consisting of medium density polyethylene and low density polyethylene.

5 15. A process according to claim 1, wherein said additives comprise coupling agents, lubricants, anti-static agents, and mixtures thereof.

16. A composition for the manufacture of an environmental friendly paper, comprising about 56% to 80% by weight of inorganic mineral powders, about 43% to 18% by weight of polyethylene, and about 1% to 2%
10 weight by additives.

17. A composition according to claim 16, wherein said inorganic mineral powders are selected from the group consisting of calcium carbonate, calcium sulfate, barium sulfate, kaolin, mica, zinc oxide, dolomite, glass fiber, hollow glass microbead, silica, chalk, talc, pigment, titanium dioxide,
15 silica dioxide, bentonite, clay, diatomaceous earth and mixtures thereof.

18. A composition according to claim 16, wherein said polyethylene comprises high density polyethylene, or a combination of high density polyethylene with at least one selected from the group consisting of medium density polyethylene and low density polyethylene.

20 19. A process according to claim 16, wherein said additives comprise coupling agents, lubricants, and anti-static agents and mixtures thereof.